



## ANTIDEPRESSANT USE IN POSTPARTUM DEPRESSION

Postpartum depression (PPD) is a common disorder that affects more than 10% of women within the first three months after delivery.<sup>1</sup> Untreated postpartum depression is associated with maternal morbidity and disruptions to mother-child attachment and interaction. In addition, infant cognitive and emotional development can be adversely affected.<sup>2,3</sup>

### Treatment

Management of PPD includes non-pharmacological and pharmacological interventions. Non-pharmacologic treatments for postpartum depression involve interpersonal psychotherapy and cognitive-behavioral therapy.<sup>2,4</sup> This approach may be helpful for patients with mild depression; however, many patients may still need treatment with an antidepressant. When selecting an antidepressant, clinicians should take into consideration the mother's desire to breastfeed, since breastfeeding benefits both mother and infant.

The selective serotonin reuptake inhibitors (SSRIs) are the initial drugs of choice in postpartum depression because these agents are associated with a lower risk of toxicity in cases of overdose, are convenient to administer and have been used with relatively good results in breastfeeding moms. However, if a patient has responded well to a particular antidepressant in the past, that drug should be considered provided there is some evidence to show safety and efficacy in breastfeeding.<sup>4</sup> Table 1 provides a summary of the use of SSRIs in postpartum depression.

**Table 1: Comparison of Selective Serotonin Reuptake Inhibitors**

SSRI	Comments	Adverse Effects Reported
Citalopram (Celexa®)	<ul style="list-style-type: none"> <li>❖ Has been used for PPD, but available data is limited<sup>1</sup></li> <li>❖ One small long-term study showed no adverse infant effects, and no difference in neurological development at one year of age as compared to control group<sup>9</sup></li> </ul>	<ul style="list-style-type: none"> <li>❖ One case report of an infant having uneasy sleep, which normalized with dose reduction<sup>9</sup></li> <li>❖ Two case reports of excessive somnolence, decreased feeding, and weight loss in breastfed infants<sup>8</sup></li> </ul>
Fluoxetine (Prozac®)	<ul style="list-style-type: none"> <li>❖ Has been used in PPD<sup>4</sup></li> <li>❖ Has a highly active metabolite (norfluoxetine), and both fluoxetine and norfluoxetine have very long half-lives; there have been reports of some infants having high serum levels of fluoxetine and norfluoxetine<sup>4,7</sup></li> </ul>	<ul style="list-style-type: none"> <li>❖ The following infant adverse effects have been reported for infants whose mothers were taking fluoxetine and breastfeeding: colic, irritability, crying, poor feeding, vomiting, diarrhea, decreased sleep, and lower growth curves<sup>4,7</sup></li> </ul>
Fluvoxamine (Luvox®)	<ul style="list-style-type: none"> <li>❖ Has been used for PPD<sup>4,7-8</sup></li> </ul>	<ul style="list-style-type: none"> <li>❖ No adverse effects have been reported in breastfed infants whose mothers took fluvoxamine<sup>1,4,5,6</sup></li> <li>❖ One long-term study showed no adverse effects in two infants who were followed for two to three years after breastfeeding exposure<sup>7</sup></li> </ul>
Paroxetine (Paxil®)	<ul style="list-style-type: none"> <li>❖ Has been used for PPD<sup>1,4-6</sup></li> <li>❖ Favorable treatment option since minimal amounts of drug are transferred into breast milk</li> </ul>	<ul style="list-style-type: none"> <li>❖ No adverse effects have been reported in breastfed infants<sup>1,4,5,6</sup></li> </ul>
Sertraline (Zoloft®)	<ul style="list-style-type: none"> <li>❖ Has been used for PPD<sup>1,4-5,8</sup></li> <li>❖ Is a favorable treatment option since several studies have shown that only very low levels of sertraline and its metabolite are found in infants' serum<sup>1,4,5,6</sup></li> </ul>	<ul style="list-style-type: none"> <li>❖ No reports of adverse outcomes in breastfed infants.<sup>4</sup></li> </ul>

Tricyclic antidepressants (TCA) can also be used for postpartum depression in lactating women. Amitriptyline, clomipramine, desipramine, and nortriptyline have all been studied, with nortriptyline receiving the most attention. Infants of mothers who were on TCAs while breastfeeding were followed through preschool and compared to infants who were not exposed to TCAs while being breastfed. The exposed infants did not demonstrate any signs of developmental problems. Doxepin however should not be used as sedation, respiratory depression, and high blood levels of the active metabolite occurred in infants whose mothers were breastfeeding and taking doxepin.<sup>1,4</sup>

The safety data on bupropion and venlafaxine in breastfeeding moms is limited. There are two case reports involving a total of three infants whose mothers were taking bupropion and breastfeeding which showed undetectable levels of bupropion and no infant adverse effects; however, it is advisable to watch for changes in milk production if using bupropion.<sup>7,8,10</sup> Two studies involving a total of ten infants whose mothers were taking venlafaxine and breastfeeding reported no infant adverse effects.<sup>7</sup>

Mirtazapine is a relatively new antidepressant that is structurally unrelated to other classes of antidepressants. To date, there are no published case reports on the use of mirtazapine in breastfeeding moms. However due to its long half-life and sedative properties, the use of mirtazapine in breastfeeding women is not recommended at this time.<sup>8</sup>

Sublingual estrogen and 17 $\beta$ -estradiol patches have been used to treat postpartum depression.<sup>7,11</sup> More research needs to be done to determine the safety of estrogen usage in the postpartum period, as there may be risks of thromboemboli and decreased milk production.<sup>7</sup> Progesterone treatment seemed to increase depression in a trial using progestagen norethisterone enanthate.<sup>11</sup>

### **Pharmacists Role**

Many medications can be used by a breastfeeding mom without causing adverse effects to the infant. Pharmacists are front-line for educating new parents and/or other healthcare providers on how to select an appropriate agent for a breastfeeding mom. Preferred agents are those with short half-lives, high protein binding, low oral bioavailability, high molecular weight and agents for which breastfeeding data exists.<sup>8</sup> Pharmacists should be able to advise moms on ways to reduce drug exposure to the breastfed infant. Moms should avoid feeding the infant when the drug level peaks in the maternal plasma.<sup>8</sup> If possible, have the mother take her medication as a single daily dose just before the infant's longest period of sleep.<sup>1</sup>

Once the need for antidepressant therapy has been established and an agent has been selected, it should be initiated at half the usual starting dose for four days followed by small weekly increments as tolerated until the depression is adequately controlled. This dosing titration is recommended because many women are very sensitive to the side effects of medications after delivery. Treatment should last a minimum of six months after a full remission of depression is achieved to prevent relapse of the depression.<sup>4</sup> Infants should be monitored for signs of sedation, agitation, irritability, poor feeding, and gastrointestinal symptoms. This is especially important for premature, newborn, and underweight infants as they are more susceptible to adverse effects.<sup>12</sup> Any untoward effects in the infants might warrant a change in dose, drug therapy or introduction of formula during peak drug times.

### **Conclusion**

Moms who require drug therapy for PPD want to know which drug is safest to use while breastfeeding. Large clinical trials in breastfeeding moms and exposed infants do not exist and are unlikely to be conducted for ethical reasons. Long-term data on antidepressant exposure through human milk is also scarce at this time. Pharmacists and other healthcare professionals must therefore base their recommendations and advice on case reports, small-scale studies and clinical experience.

*'Baby blues' and 'postpartum psychosis' are different from PPD.<sup>4</sup> 'Baby blues' typically pass in 1-2 weeks; 'postpartum psychosis' usually involves hospitalization of mom and baby.<sup>4</sup>*

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